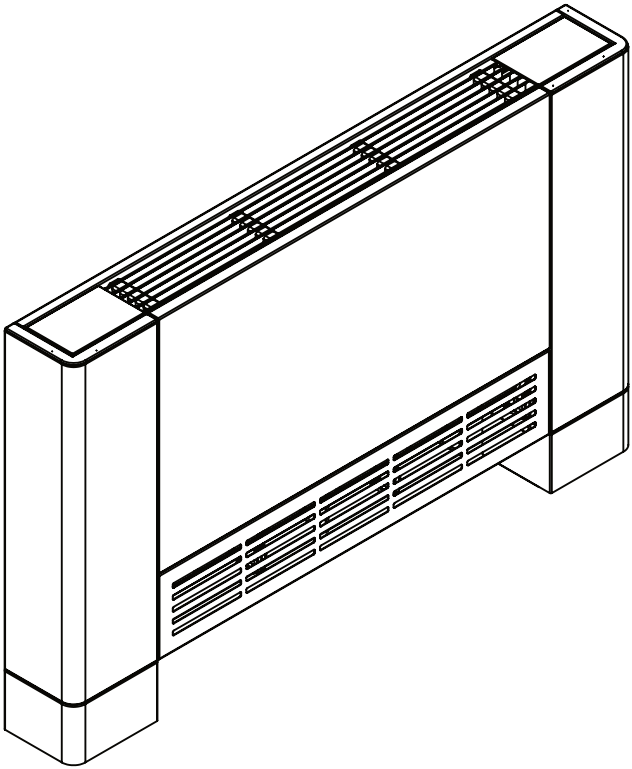
Mareli Systems

STEP FORWARD



Fan coil

AMG 890/1090/1290

User manual

rev. 2.2

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1. Introduction

Dear Users,

Our products are designed and manufactured in compliance with current standards, using high-quality materials and incorporating our extensive experience in production processes.

To achieve optimal performance, we advise you to read this manual carefully. It is an integral part of your product, so ensure it is always available, even if the unit changes ownership. If you lose the manual, you can download it directly from the manufacturer's website.

A sticker with the model and specifications of the fan coil unit can be found on the inner side of the device.

2. Safety Instructions

The fan coil unit must be installed and commissioned by an authorized technician. Professional installation and startup are essential for safe and efficient operation.

- Never modify the heating, cooling, or drainage system, nor the safety and control devices;
- This unit is designed for cooling and/or heating enclosed spaces and must be used solely for this purpose, in accordance with its operational specifications. The manufacturer is not responsible for any damage resulting from improper installation, setup, maintenance, or misuse;
- In case of leakage, turn off the system's main electrical switch and close the water valves. Contact your installer or a qualified technician for servicing—do not attempt to fix the issue yourself;
- Carefully choose the installation location, as the unit cannot be moved once connected;
- Cleaning is prohibited before disconnecting the unit from the electrical network by switching off the main breaker;
- Pulling, cutting, or tying knots in the unit's electrical cables is strictly forbidden, even when the unit is unplugged;
- The product must be connected to a grounded electrical system;
- Do not insert objects or fingers into the air intake and outlet grilles;
- Do not open the access panels to the internal parts of the unit without first disconnecting the system's power supply;
- Do not discard or leave packaging materials in places accessible to children, as they may pose a hazard;

- Do not step on the unit or place objects on top of it;
- The external parts of the unit may reach high temperatures;
- Do not use the unit to dry clothes. Any type of drying rack or hanger must be kept at a safe distance from the fan coil unit;
- The unit is not intended for use by children, individuals with reduced physical, sensory, or mental capabilities, or those lacking experience and knowledge;
- The product must undergo annual maintenance by a qualified technician;
- Always keep the covers closed.
- It is recommended to check the quality of the water in the system and treat it if necessary. Especially if it is too hard, contaminated, or has other irregularities.

	Seeing this sign means you must strictly follow the instructions for your own safety!

3. Technical Data

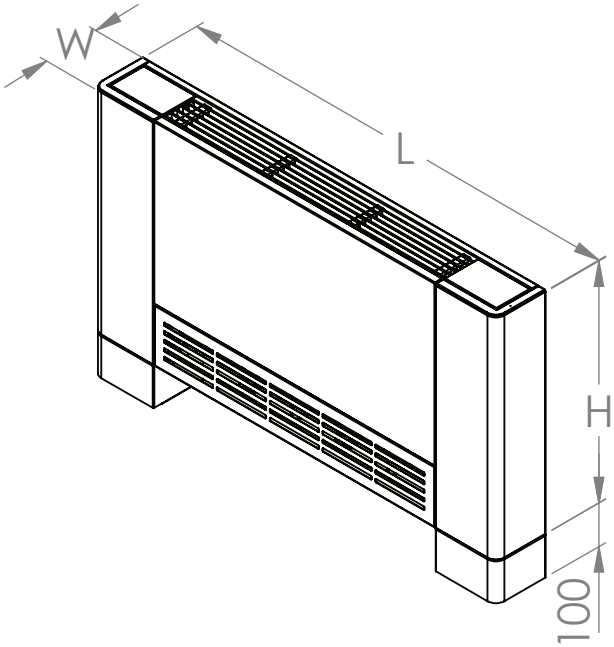
			AMG 890	AMG 1090	AMG 1290
Heating capacity *	Level 3	W	3800	6000	7900
	Level 2		3300	5200	6900
	Level 1		1000	1550	2050
Heating capacity **	Level 3	W	2350	3700	4900
	Level 2		1990	3150	4200
	Level 1		550	870	1150
Cooling capacity ***	Level 3	W	1700	2400	3450
	Level 2		1250	1980	2600
	Level 1		870	1450	1700
Noise level	Level 1	dB(A)	27	30	33
	Level 2		31	34	37
	Level 3		37	38	40
Water pressure drop	Level 3	kPa	7	15	33
	Level 2		5	11	25
	Level 1		1	1.5	4
Maximum fan flow rate		m^3/h	230	370	420
Minimum fan flow rate		m^3/h	110	180	360
Water flow rate		m^3/h	0,34	0,44	0,61
Heat exchanger Inlet/Outlet		R”	3/4		
Heat exchanger type		-	High-efficiency with copper tubes and aluminum fins		
Maximum operating pressure		bar	16		
Condensate drain connection		mm	Ø 16		
Power supply		V/Hz	230V/50Hz		
Power consumption		W	12	18	23
Dimensions W/H****		mm	135/580		
Dimensions L		mm	890	1090	1290
Weight		kg	22	25	29

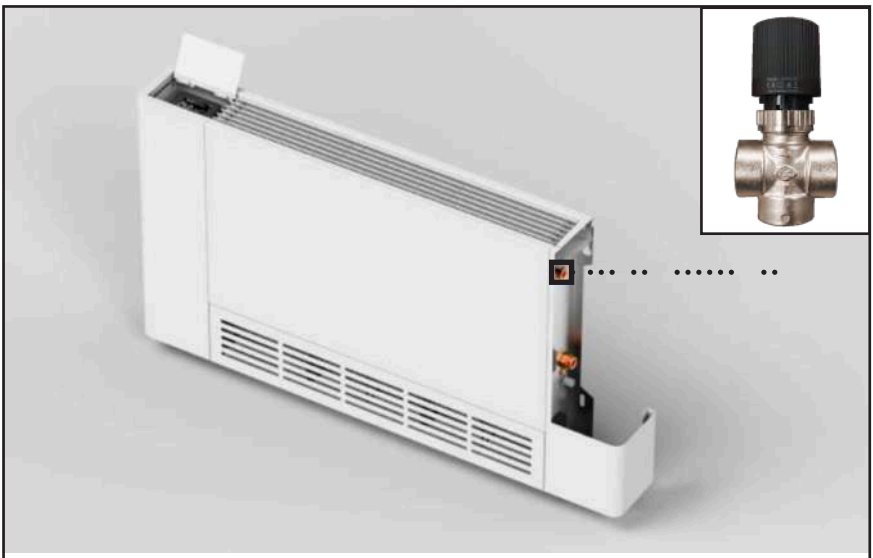
Heating capacity at a water temperature of 70°C and room temperature of 20°C (according to EN 16430-2)

** Heating capacity at a water temperature of 50°C and room temperature of 20°C (according to EN 16430-2)

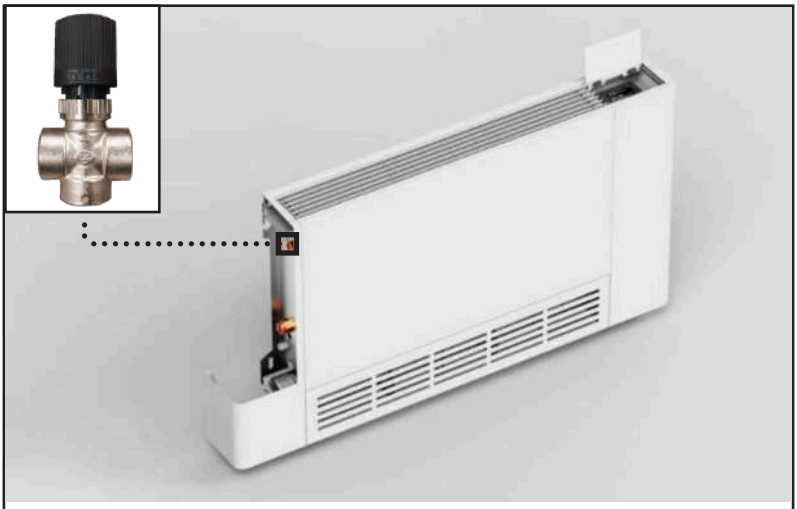
*** Cooling capacity at a water temperature of 7°C/12°C with a room temperature of DB 27°C and WB 19°C (according to EN 1397)

**** Dimension H excluding floor mounting brackets





Right-side version of the fan coil unit with an option for a two-way or three-way valve.



Left-side version of the fan coil unit with an option for a two-way or three-way valve.

4. Installation

The installation of the fan coil unit with left and right outlets is identical.

4.1 Positioning

All national, regional, and European safety requirements for the operation of the device must be followed during installation and operation.

Avoid installing the unit near:

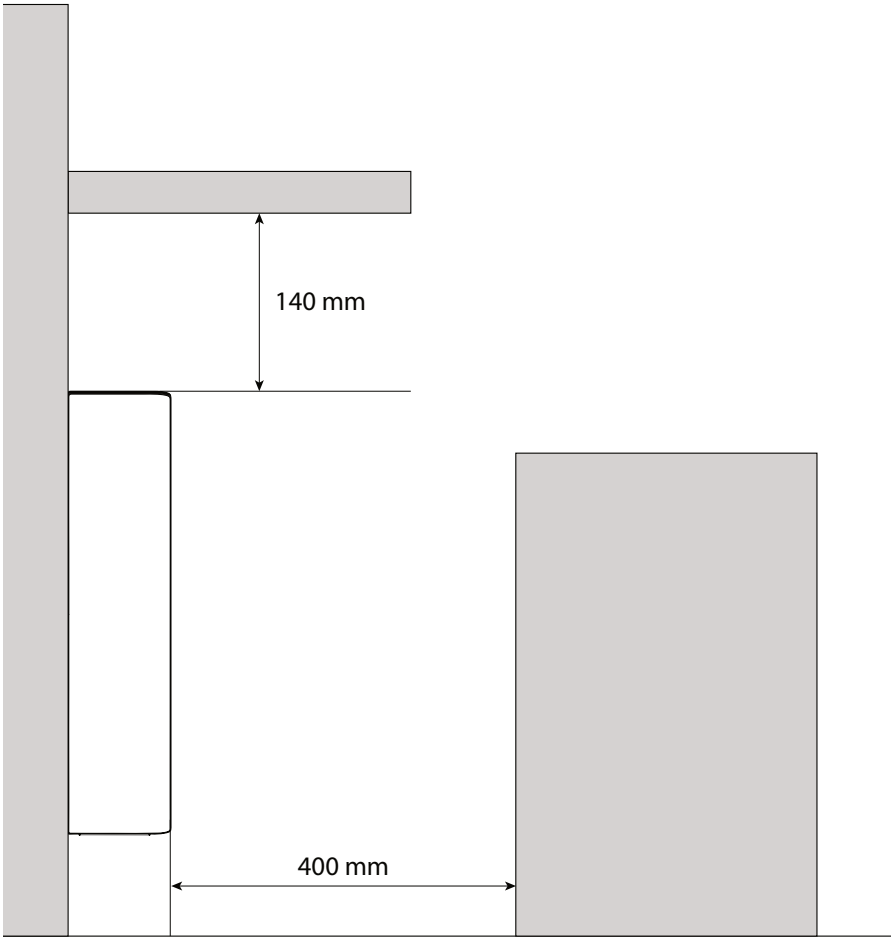
- Areas exposed to direct sunlight;
- Sources of heat;
- Humid spaces or areas where there is a risk of water contact;
- Areas with oil vapors.

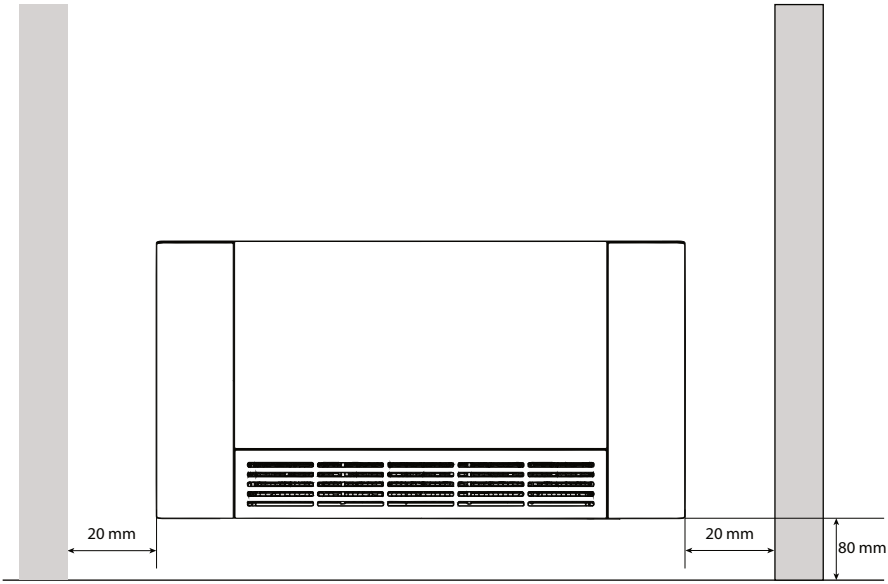
Ensure that:

- The wall where the unit is to be mounted is strong enough to support its weight;
- No pipes or electrical cables pass through the area of the wall in question;

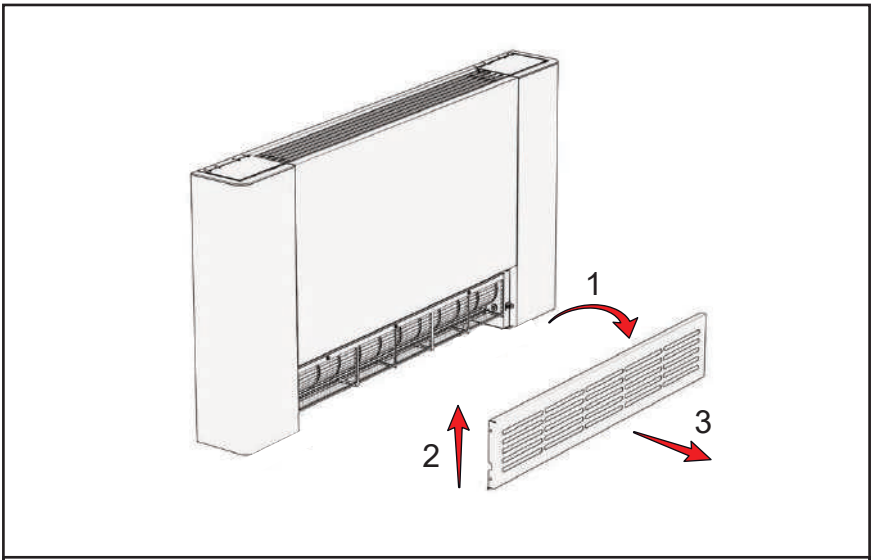
- The wall is vertical and has the necessary flat surface for mounting;
- There is enough space without obstacles that could obstruct the airflow at the unit's inlet and outlet;
- Ensure proper drainage for condensation during cooling mode.

4.2 Minimum installation clearances

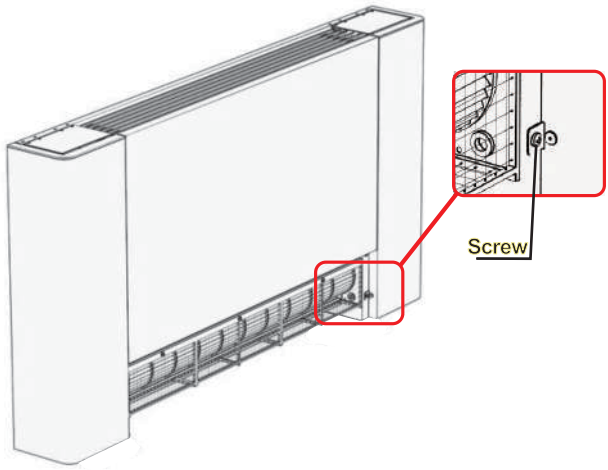




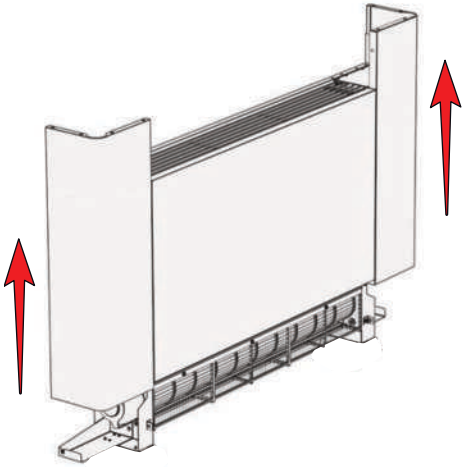
4.3 Wall mounting



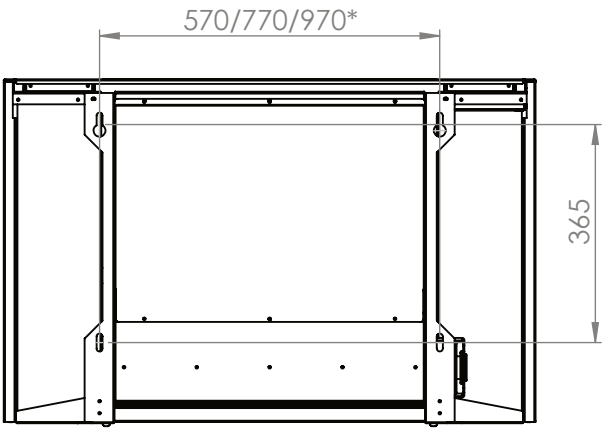
1. Pull the upper edge of the lower cover
2. Lift the cover upwards
3. Pull it forward



Unscrew the screws holding the side cover (on both sides).

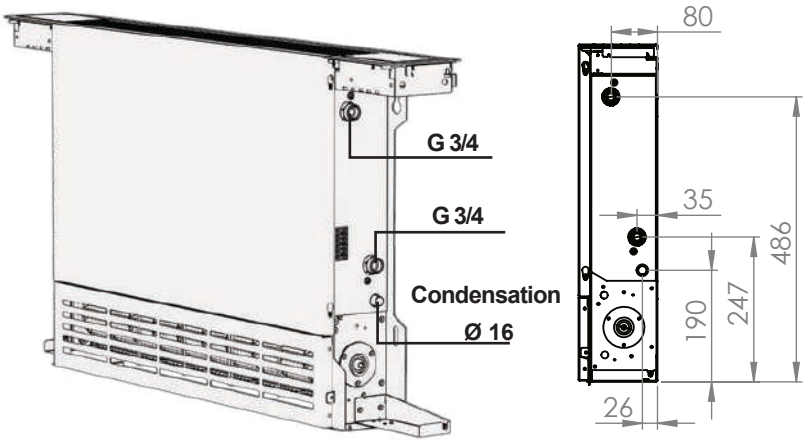


Pull the side covers upwards.

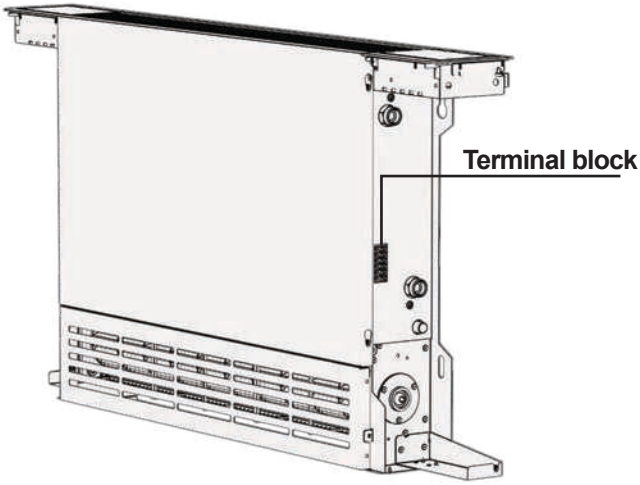


Use the appropriate fasteners depending on the type of wall to secure the fan coil unit.

*for models 890/1090/1290

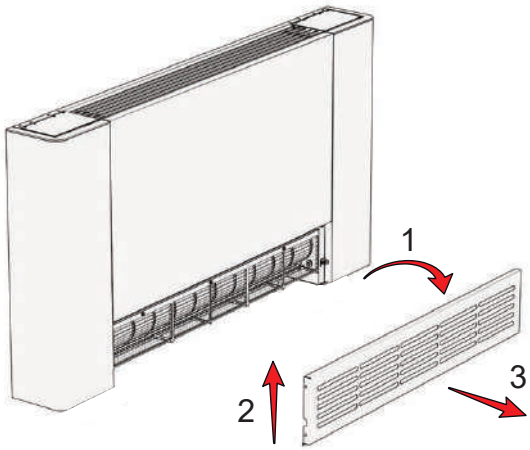


Connect to the water installation.

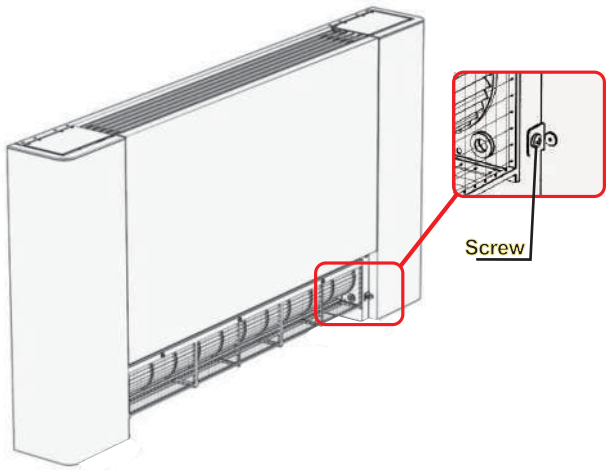


Connect the power cables to the terminal block at the corresponding places marked with L, N, and ⏚. Assemble everything in reverse order.

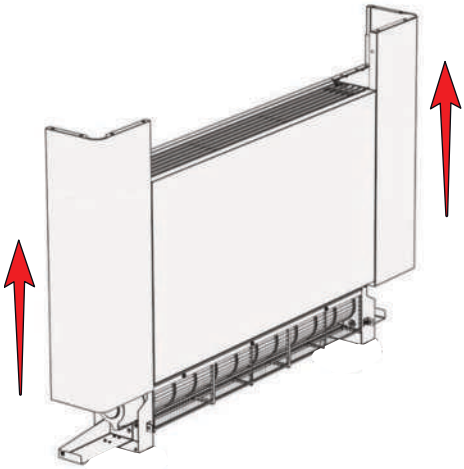
4.4 Floor mounting



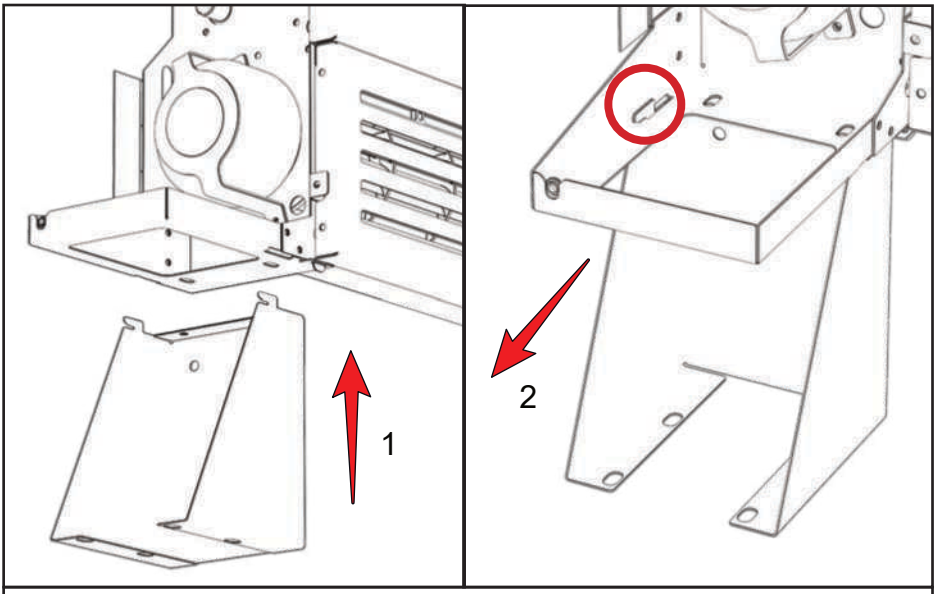
1. Pull the upper edge of the lower cover
2. Lift the cover upwards
3. Pull it forward



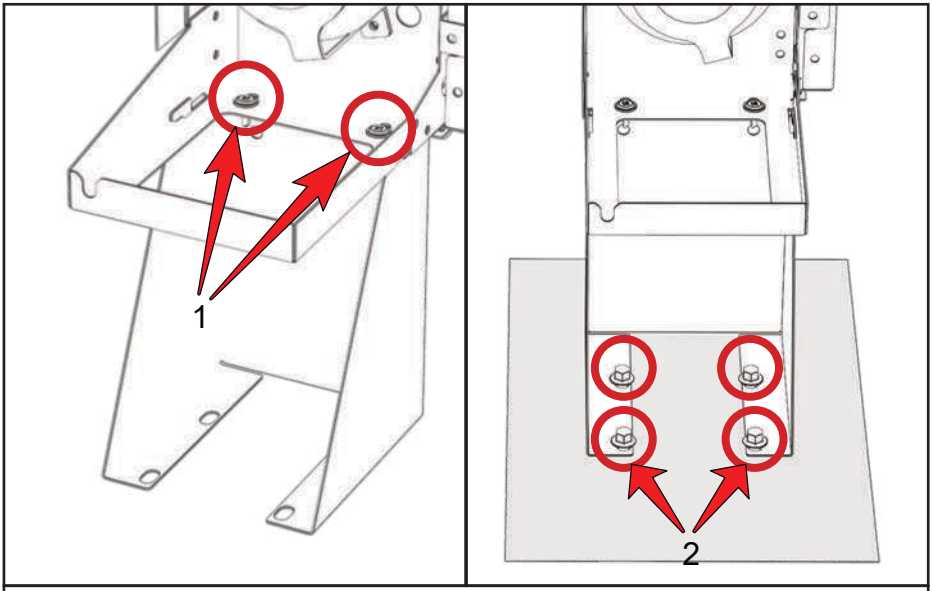
Unscrew the screws holding the side cover (on both sides).



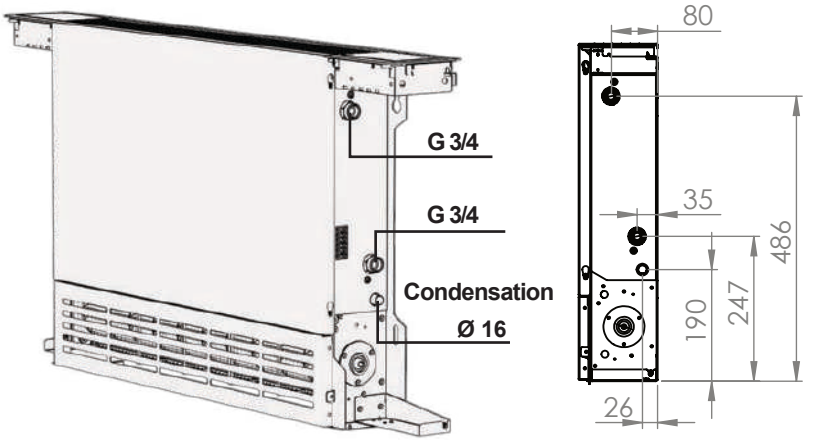
Pull the side covers upwards.



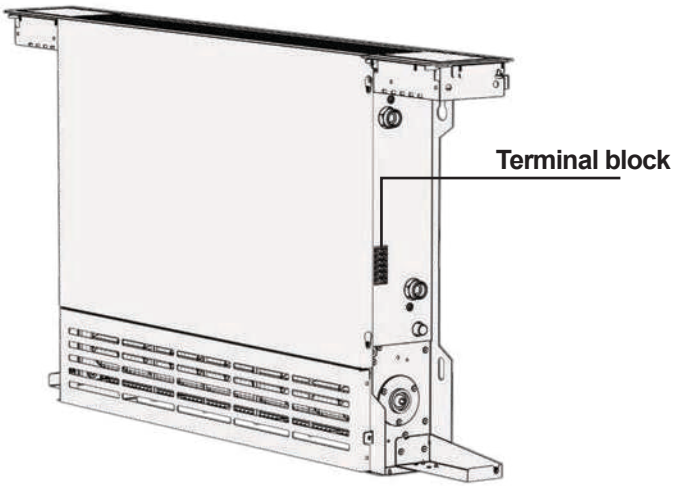
1. Insert the foot into the mounting hole
2. Pull in the specified direction



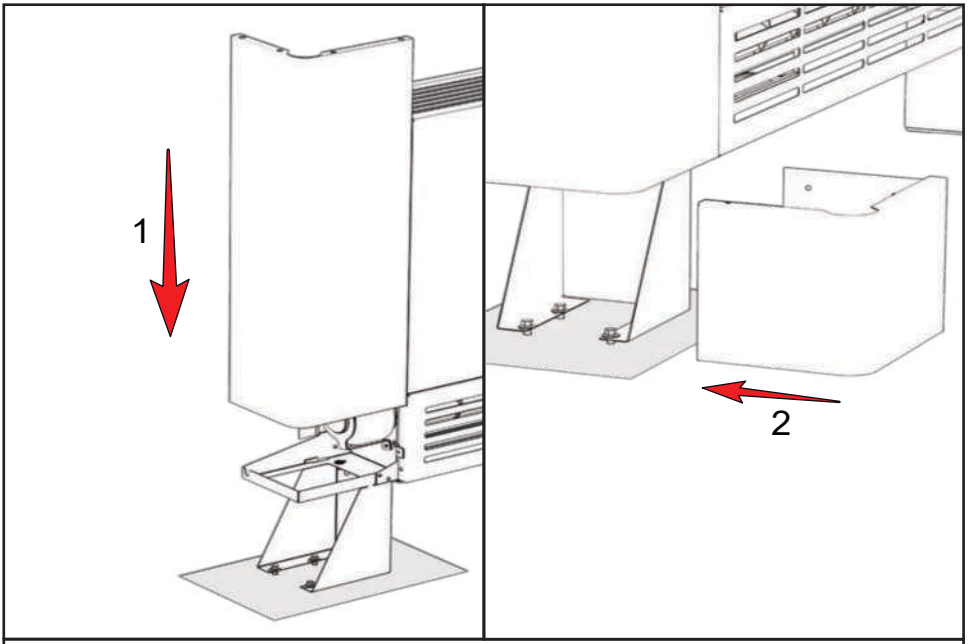
1. Secure the foot to the fan coil unit with screws
2. Secure the foot to the floor with the appropriate fasteners



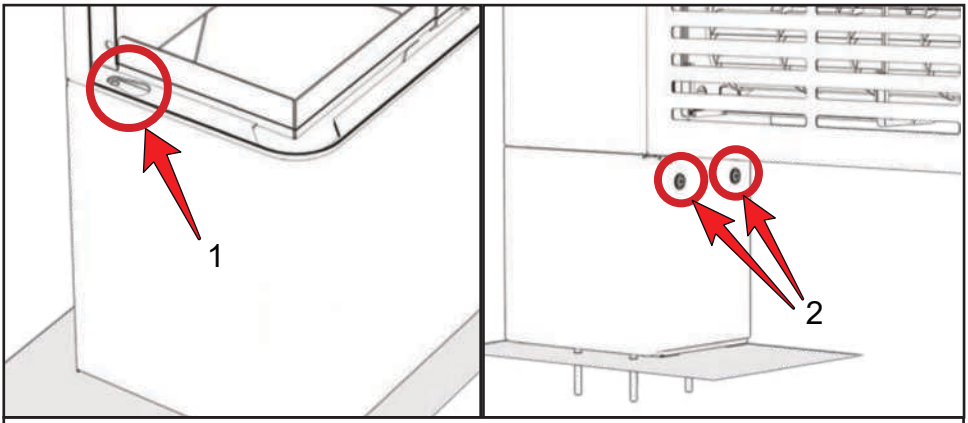
Connect to the water installation



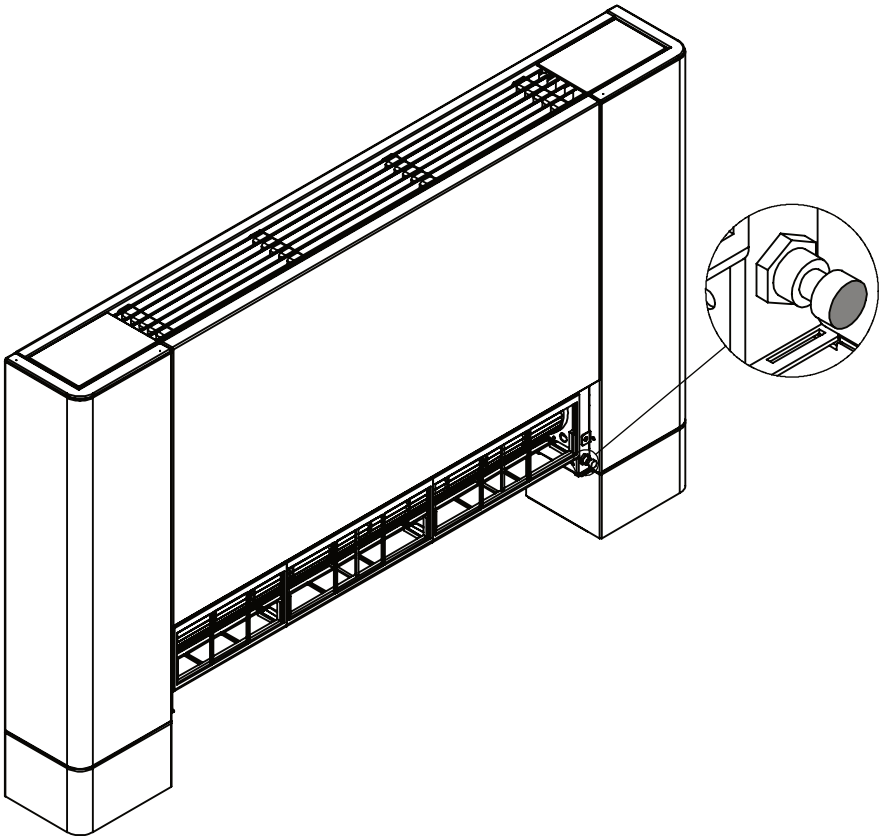
Connect the power cables to the terminal block at the corresponding places marked with L, N, and ⏚.



1. Reinstall the side cover
2. Install the decorative cover on the foot



1. When mounting the foot cover, make sure it is properly secured to the side cover of the fan coil.
2. Secure the foot cover with screws.



Your device is equipped with an end switch to stop the convector when the lower decorative cover is opened. If the cover is not properly returned and positioned, the unit will not operate again.

4.5 Connection to the water system

The selection and sizing of hydraulic connections must be done by a specialist who should work in accordance with the relevant requirements and applicable laws, considering the fact that smaller diameter pipes can cause system malfunctions.

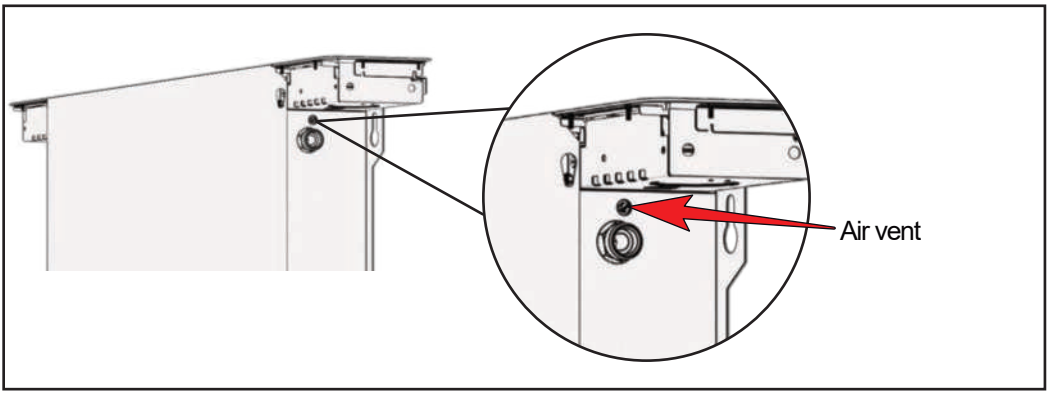
To make the connections:

- Lay the water pipes;
- Tighten the connections using two wrenches. Use one to tighten and the other to hold the counter to avoid damaging the heat exchanger;
- Check for leaks;
- Cover the pipes and connections with appropriate insulation.

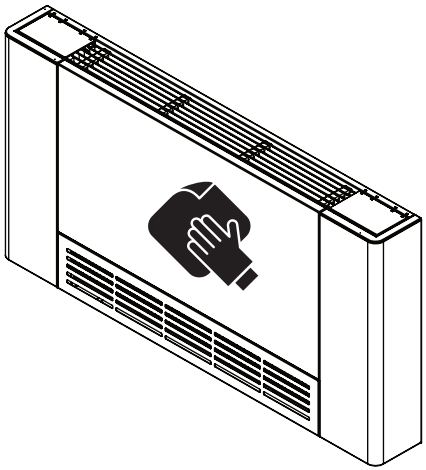
⚠	**The water pipes and fittings must have thermal insulation. Avoid partially insulating the pipes. Do not tighten excessively to avoid damaging the insulation. Use hemp and sealing paste to seal threaded connections. It is recommended to use Teflon tape when the hydraulic circuit includes anti-freeze treatment.**

4.6 Filling the system

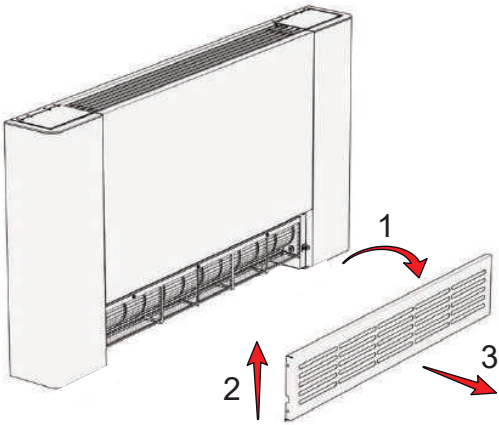
When starting the system, make sure the air vent on the heat exchanger is open. If there is no power from the network, but the thermal valve has already been powered, use the special head to press the shut-off device on the valve to open it.



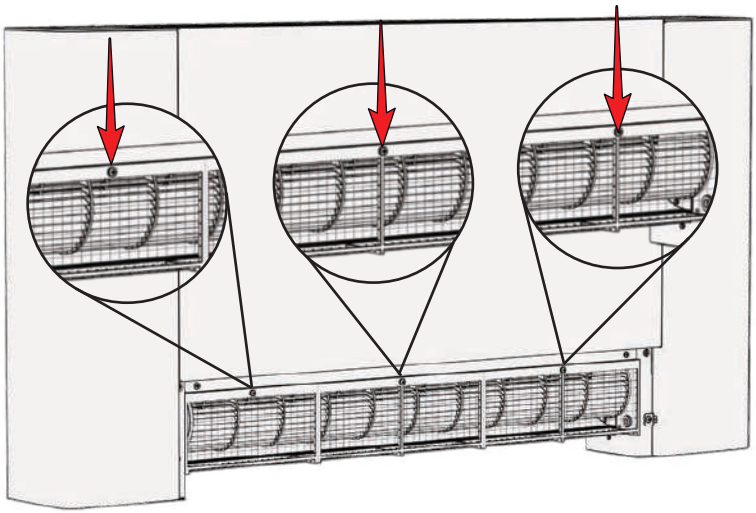
5. Cleaning



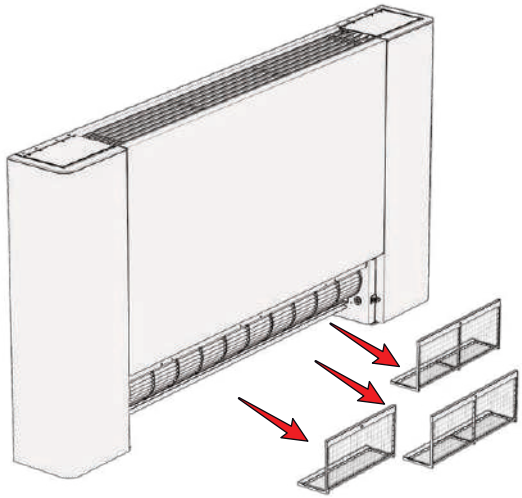
Clean the external surface with a soft cloth and without using abrasive cleaners.



1. Pull the upper edge of the lower cover
2. Lift the cover upwards
3. Pull it forward



Remove the screws holding the filters.



Remove the filters and clean them. Reassemble in reverse order. Be careful to properly position the lower cover in relation to the end switch.

6. Control

TA652FC is a controller that manages the convector to maintain the room temperature at the desired level. The switching sensor is required for installation when automatic switching is used.

6.1 Installation and connection

1. Turn off all electrical devices (e.g., heater, cooler) connected to the unit before installation and maintenance.
2. The installer must be trained service personnel.
3. Disconnect the power supply before maintenance.
4. Install in a dry, clean, and enclosed space.
5. Do not expose this device to moisture.
6. Do not expose this device to immersion or splashes.

Features:

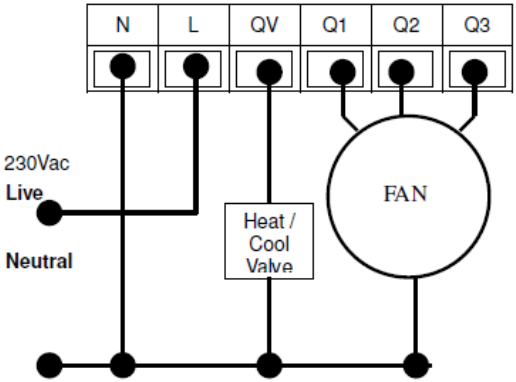
- Power supply voltage: 230VAC;
- Temperature display in °C or °F;
- Measurable temperature range: 0 – 50 °C;
- For a two-pipe system;
- Manual or automatic switching option;
- Heating/cooling selection;
- 7 days/5+1+1 days/1 day program/no program;
- EEPROM stores all settings;
- Adjustable and WiFi control.

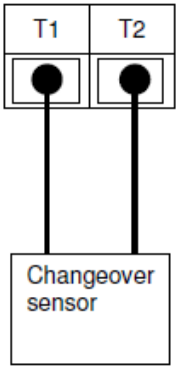
Do not use cables with a metal sheath.

It is recommended to add a fuse or protective device to the circuit.

Wiring

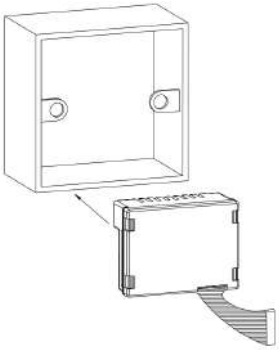
TERMINALS	DEVICE
L	230VAC LINE
N	230VAC NEUTRAL
QV	SWITCHING VALVE
Q1	LOW POWER FAN
Q2	MEDIUM POWER FAN
Q3	MAXIMUM POWER FAN
T1	SWITCHING SENSOR
T2	WATER TEMPERATURE SENSOR



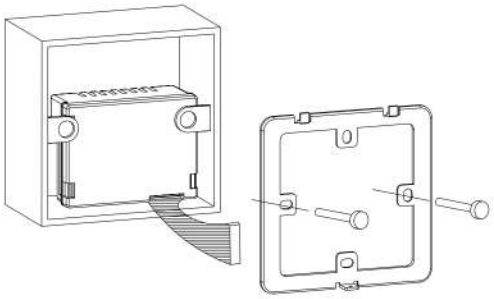


1. Do not use cables with a metal sheath.
2. It is recommended to add a fuse or protective device to the circuit.

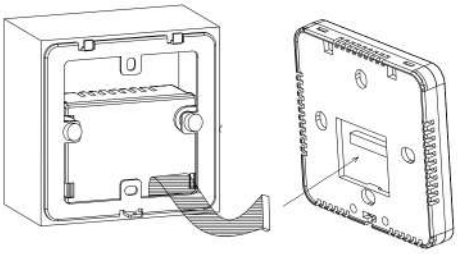
Installation



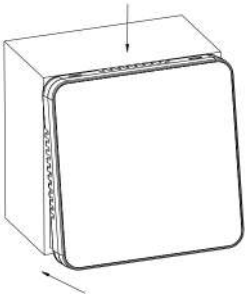
1. Place the relay module inside the wall box, with the back of the relay module facing outward.



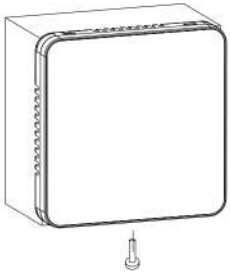
2. Install the metal bracket.



3. Connect the front device to the relay device using the cable.

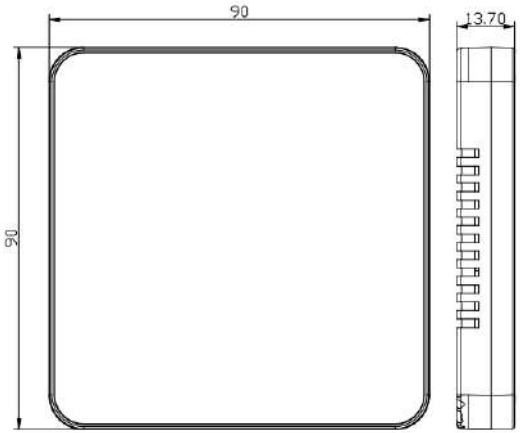


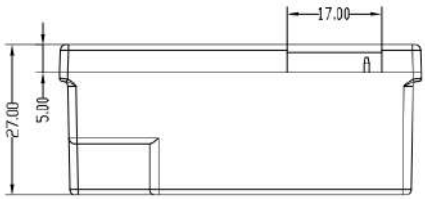
4. Snap the metal bracket from the front, using the upper edge as a hinge.

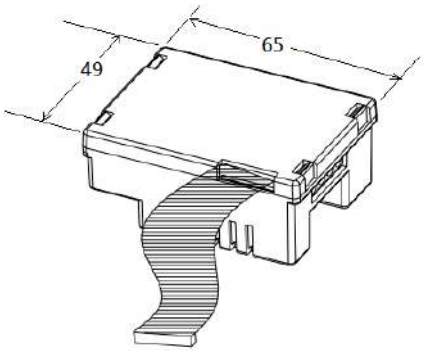


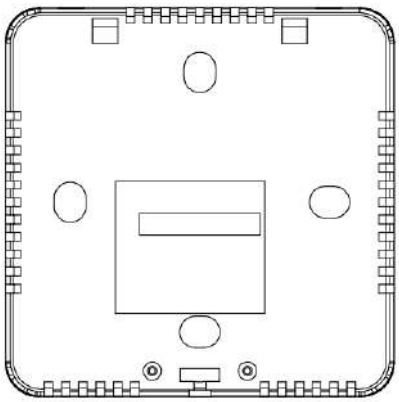
5. Install the fastening screw.

Dimensions









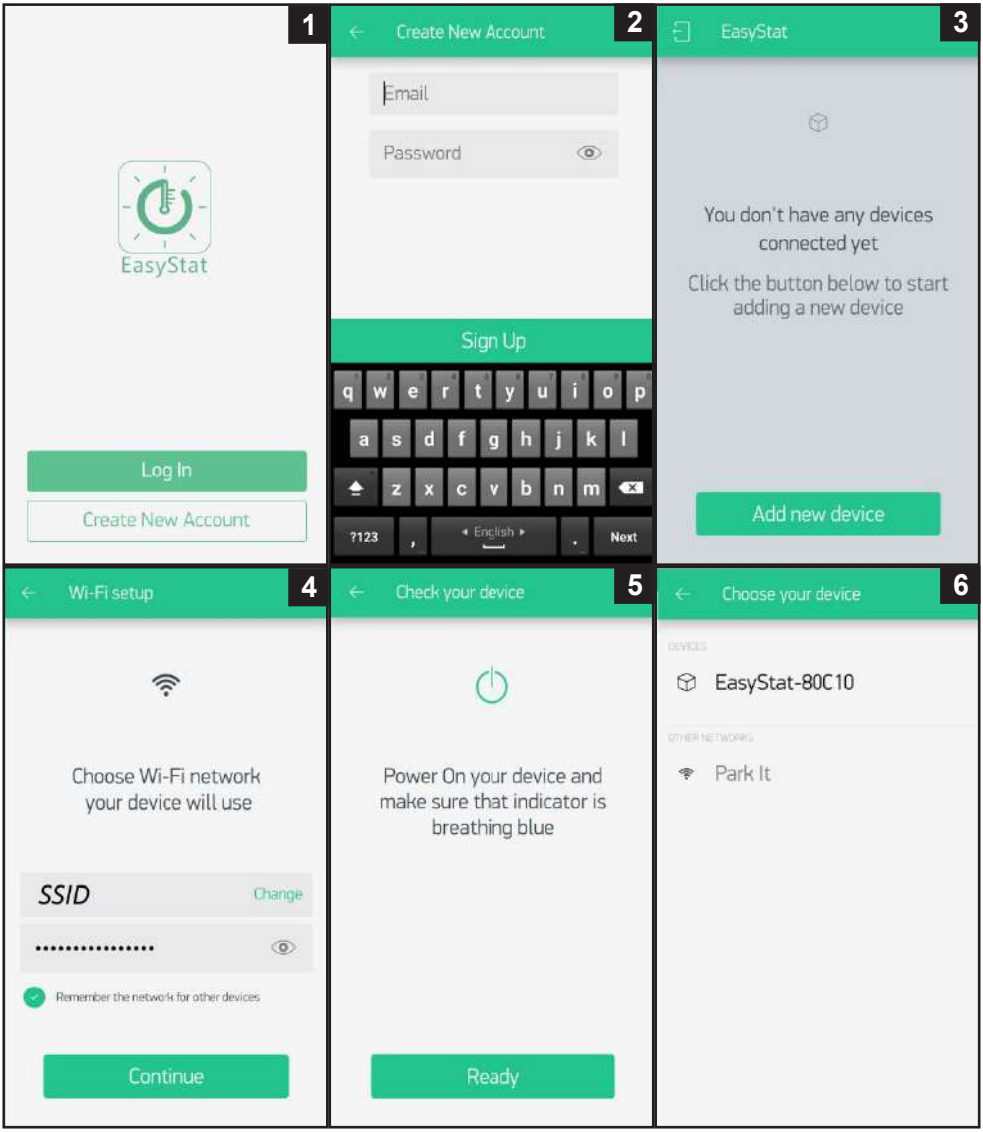
6.2 Control

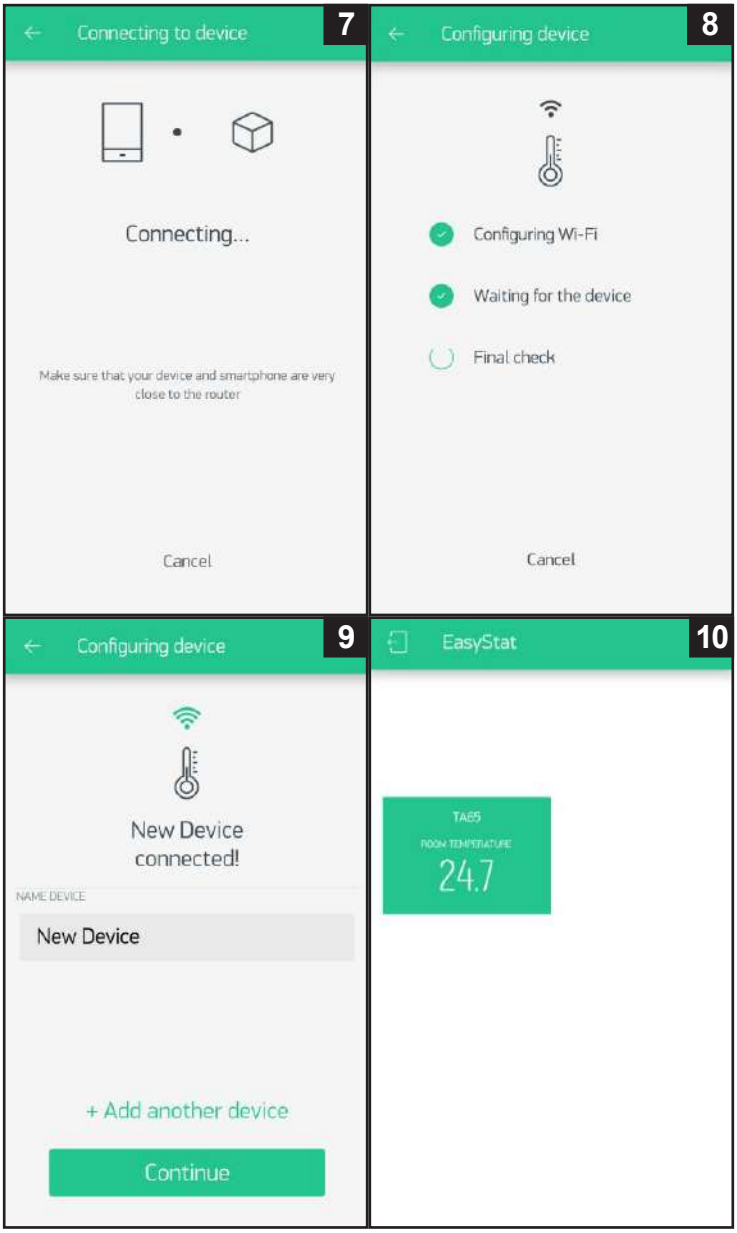
MEANING OF THE ELEMENTS	
1	Time
2	Room temperature
3	Current set temperature
4	Temperature unit
5	Current program
6	Heating/Cooling mode
7	Automatic switching
8	The output is ON (when it appears) (valve on)
9	Fan Low/Medium/High/Automatic
10	Wi-Fi (displays when connected to the internet)
11	Mode: Press to change Heating/Cooling Mode Press and hold to access internal settings
12	Clock: Press to set the clock. Press and hold to program the work shedule.
13	Button with dual function: fan/ON Press: Fan Low/Medium/High/Automatic Press and hold: ON/OFF
14	Up/Down button: Adjust the set point or value of the setting.

6.3 Connecting via mobile app.

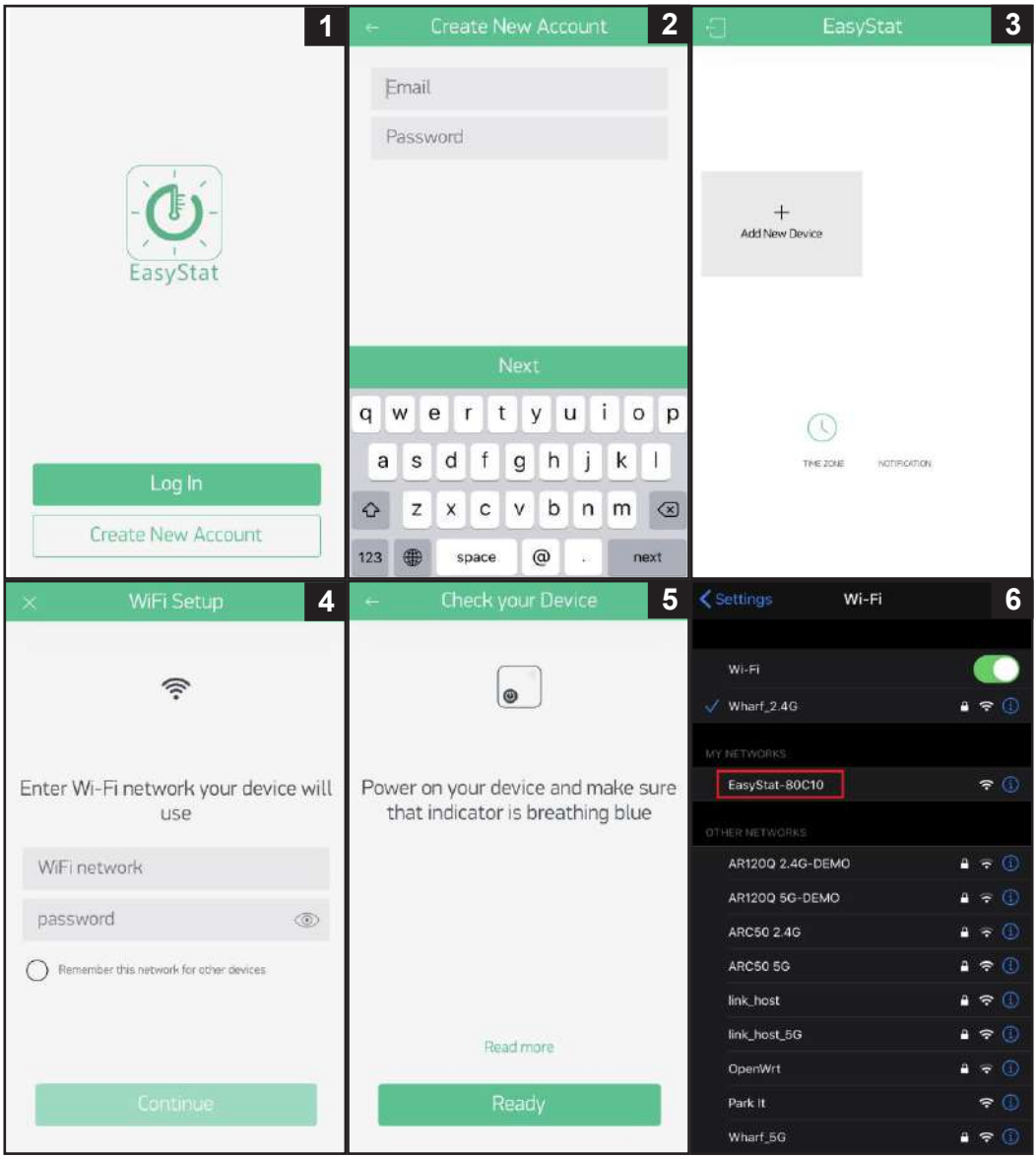
Download the Easy Stat app on the appropriate smart device.

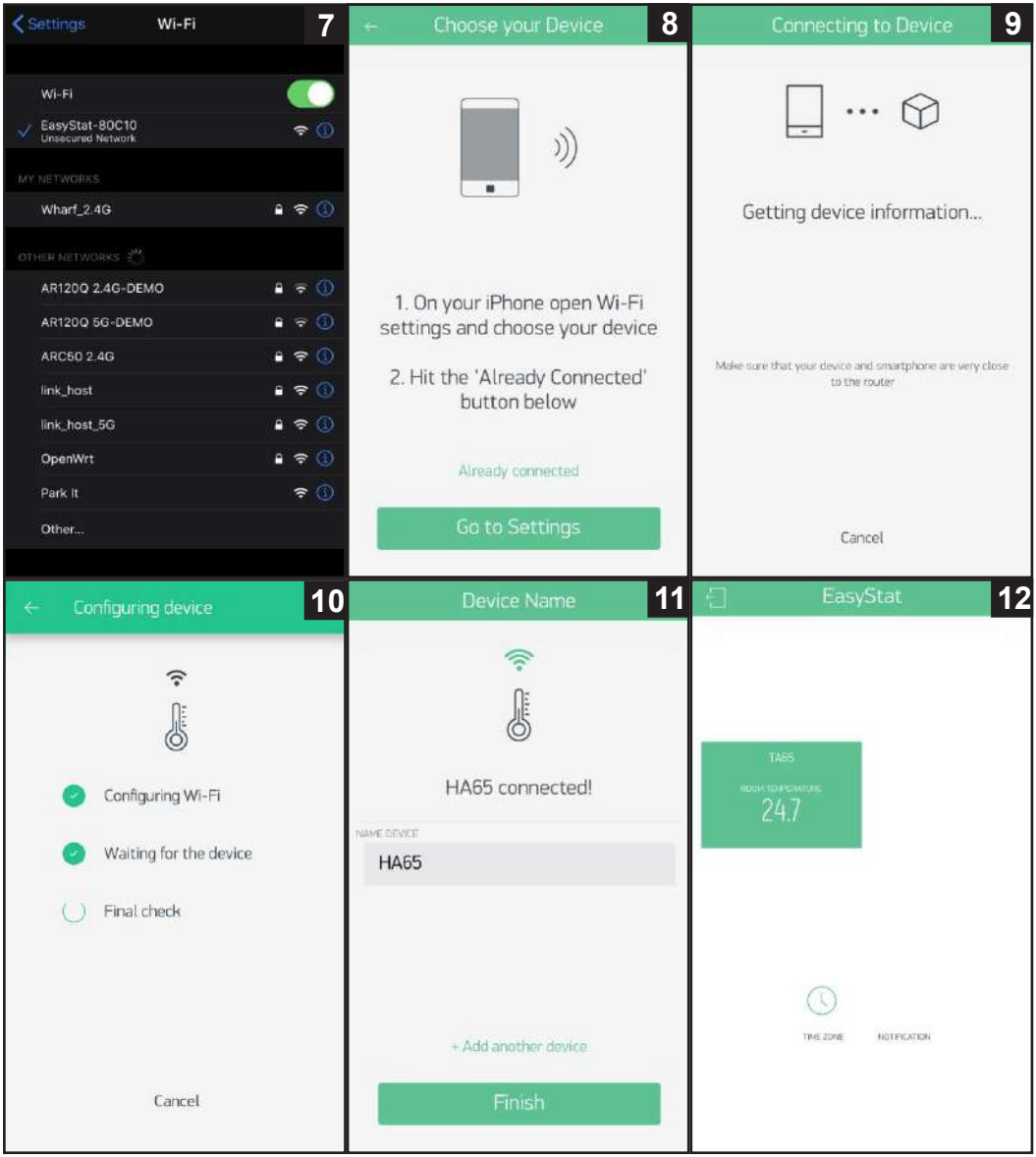
For devices with the Android operating system.



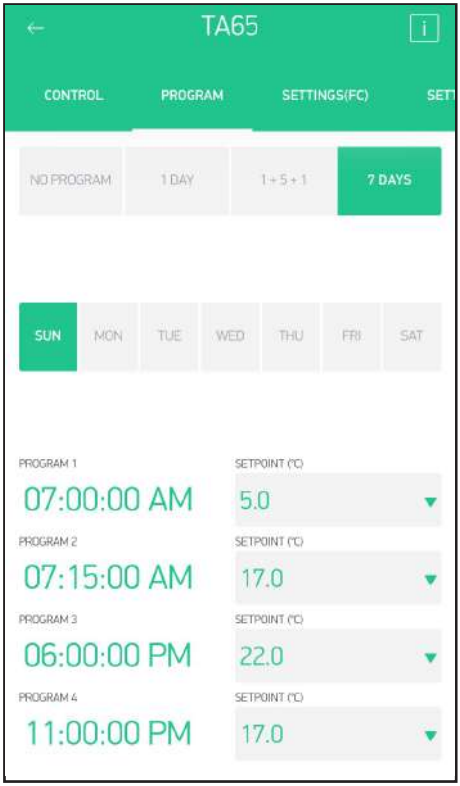

Connecting to device
7
Connecting...
Make sure that your device and smartphone are very close to the router
Cancel
Configuring device
8
Configuring Wi-Fi
Waiting for the device
Final check
Cancel
Configuring device
9
New Device connected!
NAME DEVICE
New Device
+ Add another device
Continue
EasyStat
10
TA65
ROOM TEMPERATURE
24.7

For devices with the iOS operating system.




7
Settings
Wi-Fi
Wi-Fi
EasyStat-80C10
Unsecured Network
MY NETWORKS
Wharf_2.4G
OTHER NETWORKS
AR120Q 2.4G-DEMO
AR120Q 5G-DEMO
ARC50 2.4G
link_host
link_host_5G
OpenWrt
Park It
Other...
8
Choose your Device
1. On your iPhone open Wi-Fi settings and choose your device
2. Hit the 'Already Connected' button below
Already connected
Go to Settings
9
Connecting to Device
Getting device information...
Make sure that your device and smartphone are very close to the router
Cancel
10
Configuring device
Configuring Wi-Fi
Waiting for the device
Final check
Cancel
11
Device Name
HA65 connected!
NAME DEVICE
HA65
+ Add another device
Finish
12
EasyStat
TA65
ROOM TEMPERATURE
24.7
TIME ZONE
NOTIFICATION

6.4 Interface of the mobile application / LCD display.

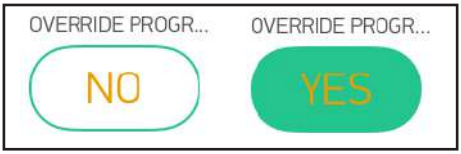


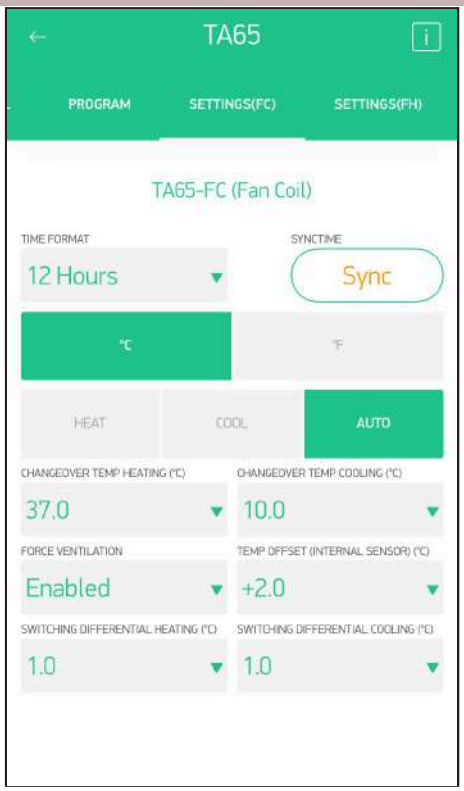
- In the "Control" section, the Room temperature, Floor temperature, Current set point, and Next set point (next program) will be displayed.- Press the power button to turn the thermostat on or off.
- Press + or – to adjust the current set point or to cancel the program. The button turns green.
- Press the "Cancel Program" button to cancel the cancellation or set value.
- The history section shows temperature data for 1 day / 1 week / 1 month.

- In the "Programs" section, the current program mode will be displayed. (No program / 1 day / 1+5+1 / 7 days).

- When "No program" is selected, no settings can be adjusted.

- When "1 day / 1+5+1 / 7 days" program is selected, the time interval of the program and the set point can be adjusted.





- In the "Settings" section, internal settings can be adjusted.
- You can choose the heating/cooling/automatic switching mode.
- The temperature setting for switching between heating/cooling only applies when the automatic switching mode is selected.
- The temperature offset is adjusted only when there is a difference between the actual temperature and the measured value from the thermostat.
- The thermostat clock will sync when "Sync" is pressed.

TA652FC-W LCD interface

Turning the thermostat on/off

Press and hold the [Power On/Off button] to turn the thermostat on/off. When the thermostat is off, no output will be activated.

Clock setting

When connected to WiFi, the clock is automatically synchronized.

Press [CLOCK] to start the setting;
Press [▲] / [▼] to change the day of the week;
Press [CLOCK] again to confirm the day setting and start setting the hour;
Press [▲] / [▼] to change the hour;
Press [CLOCK] again to confirm the hour setting and start setting the minutes;
Press [▲] / [▼] to change the minutes;
Press [CLOCK] again to confirm the minute setting and start setting the day of the week;
Press [empty] to confirm or exit the clock setting.
Or return after no button has been pressed for 20 seconds.

Clock Synchronization

The controller synchronizes the local time when there is internet access.
Please ensure that it stays connected.
If you want to manually sync the network clock, press the button in the app.

Programming the Time Schedule

When 1 day / 5+1+1 days / 7 days program is selected in internal settings:
- Press and hold [CLOCK] to start the setting..
- Press [▲] / [▼] to set the day of the week.
- Press [CLOCK] to confirm.
- Press [▲] / [▼] to adjust the time of the schedule.
- Press [CLOCK] to confirm.
- Press [▲] / [▼] to adjust the set temperature.
- Press [CLOCK] to confirm.
- Press [Empty] to exit.

Temperature Cancellation

The set point can be adjusted using [▲] / [▼]. When in program mode, the set point will be cancelled until the next time interval.
Press [CLOCK] to release the override.

Internal Settings of Parameters P0-P15

- Press and hold [Mode].
- Press [Mode] to go to the next item.
- Press [▲] / [▼] to adjust the value.
- Press [empty] to confirm and exit.

Parameter	Value	Default Value
Screensaver of the User Interface (P00)	0-3	3
Screensaver Timer (P01)	0-120	20
Temperature Unit (P02)	°C / °F	°C
Time Unit (P03)	12 / 24	24
Temperature Sensor Offset (P04)	-5°C ~ 5°C, -10°F ~ 10°F	0°C
Differential Value in HEATING Mode (P05)	2 ~ 4°C, 4 ~ 8°F	1°C
Differential Value in COOLING Mode (P06)	2 ~ 4°C, 4 ~ 8°F	1°C
Setting the weekly program (P07)	No program (0) / 1day program (1)/ 5+1+1 program (2) / 7day program (3)	0
Forced fan operation (P12)	Deactivation, activation	Deactivation
Operating mode (P13)	Heating, cooling, automatic	Heating
Temperature for activation in HEATING mode (P14)	27 ~ 40°C	30
Temperature for activation in COOLING mode (P15)	10 ~ 25°C	22

Screensaver on the user interface (P00):
The thermostat will enter screensaver mode after a set period of inactivity.
Mode 0: Nothing will be displayed in screensaver mode.
Mode 1: Only room temperature will be displayed in screensaver mode.
Mode 2: Room temperature and time will be displayed in screensaver mode.
Mode 3: Everything will be displayed in screensaver mode.

Screensaver timer (P01):

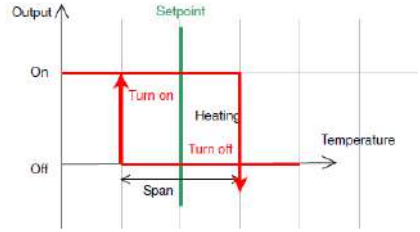
The countdown time (in seconds) until the screensaver mode is activated.

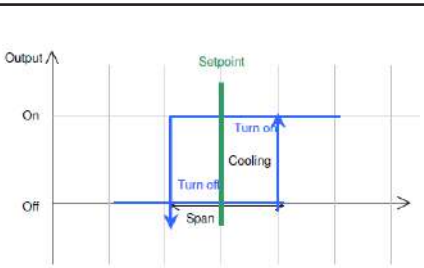
Temperature display unit (P02):
The unit for temperature in Celsius or Fahrenheit.

Time display format (P03):
12/24-hour format.

Temperature offset (P04):
The temperature reported by the convector control can be calibrated from -5°C to +5°C if there is a temperature difference between the actual temperature value.

Switching differential (P05-P06):
The differential difference between the turning on and turning off of the set temperature in heating or cooling mode.





Chrono program:

"0": No program mode. The thermostat controls the temperature based on a single set temperature.

"1": 1-day program. The thermostat controls the temperature based on a single schedule.

"2":5+1+1-dayprogram.Thethermostatcontrols the temperature based on a 5+1+1 schedule (Monday to Friday, Saturday, Sunday).

"3": 7-day program. The thermostat controls the temperature based on a 7-day schedule (individual program for each day).

Forced ventilation (P12):

Off: The fan will turn on only when heating/cooling is active.
On: The fan continues to run (at level 1) even if heating/cooling is off.

Operating Mode (P13):

0: Heating mode
1: Cooling mode
2: Automatic switching:
When the switching sensor detects a temperature above the set heating switch point, heating mode is activated.

When the switching sensor detects a temperature below the set cooling switch point, cooling mode is activated.

Heating Switch Setting (P14):

Sets the water temperature value in heating mode at which the fan coil's water temperature sensor allows the fan to turn on.

Cooling Switch Setting (P15):

Sets the water temperature value in cooling mode at which the fan coil's water temperature sensor allows the fan to turn on.

Factory settings

Parameter	Value	Default Value
Remove WiFi Configuration (P19)	Yes or no	No
Reset Parameter Settings (Restore Factory Defaults) (P20)	Yes or novv	Noc

- Press and hold [Mode] + [Fan] (buttons 11 and 13 on page 25)
- Press [Mode] to move to the next item.
- Press [▲] / [▼] to adjust the value.
- Press [blank] to confirm.

Removing WiFi configuration (P19)
When set to "Yes," the SSID and password stored in the thermostat will be cleared.

Clearing parameter settings (P20):
When set to "Yes," all internal parameter settings will be restored to default values upon the next power-up, meaning a power cycle is required to complete the clearing process.

Defrost
When the room temperature is below 5°C/41°F, the output will turn on in heating mode or the output will turn off in cooling mode. A defrost indicator will appear on the screen ❄ .

Technical Data

Power Supply:
230 ± 10% VAC

Relay Contact Voltage:
230VAC max 50/60 Hz

Relay Contact Current:
2(1)A max

Sensitive Element:
103AT

Terminals:
2 mm²

Operating Temperature:
32 – 122 °F / 0 – 50 °C

Storage Temperature:
23 – 122 °F / -5 – 50 °C

Operating Humidity:
5-95% RH without condensation

7. Spare parts

Figure 1

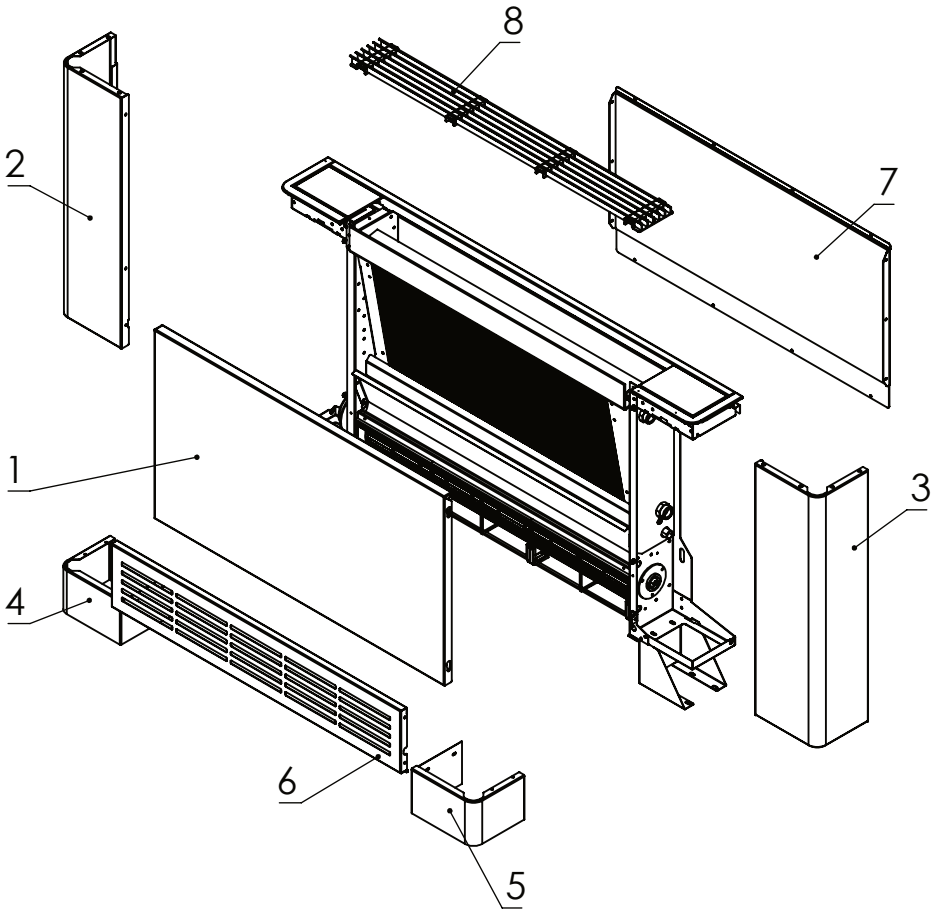
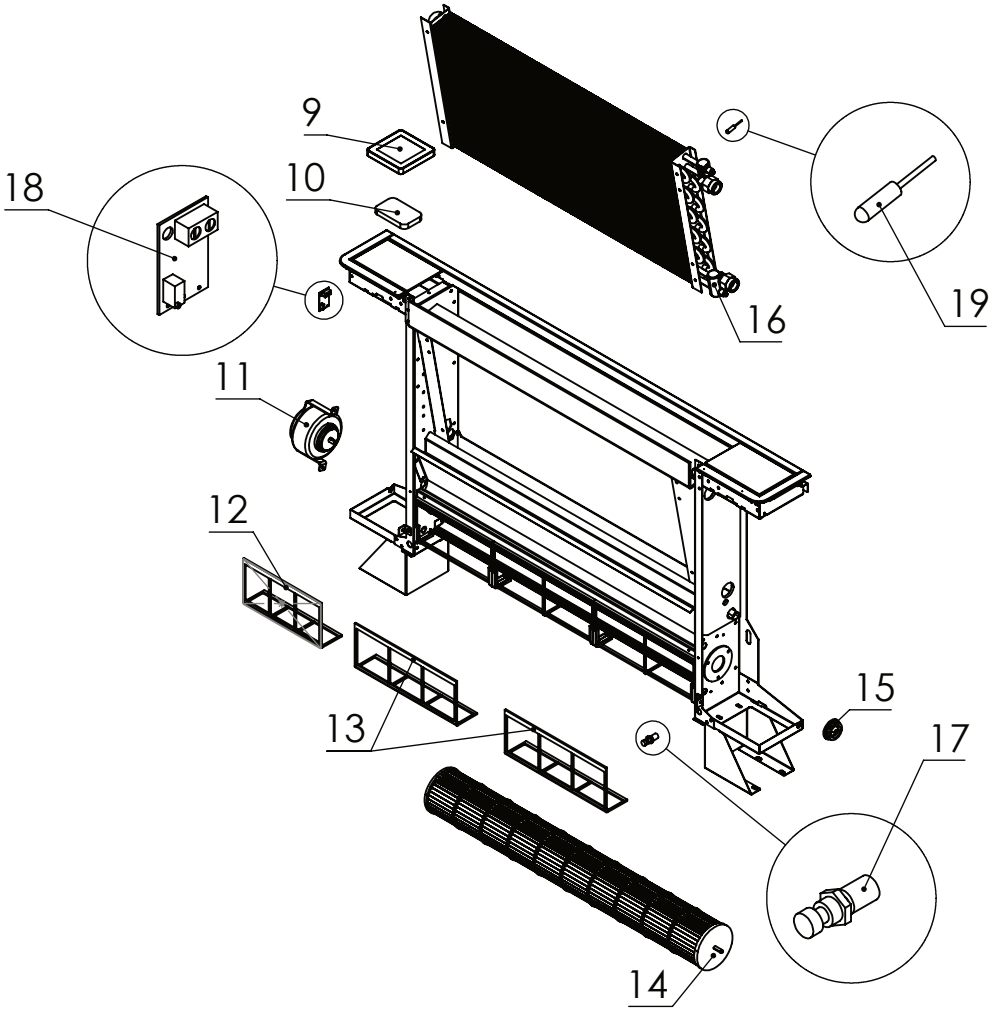


Figure2



Pos.	Name
1	Front Decorative Panel with Insulation
2	Left Decorative Panel
3	Right Decorative Panel
4	Decorative Panel Left Leg
5	Decorative Panel Right Leg
6	Front Lower Cover
7	Rear Panel with Insulation
8	Top Grille
9	Display
10	Control Board
11	Motor
12	Filter 20 cm (1 piece)
13	Filter 26 cm (1 piece)
14	Fan
15	Fan Bushing
16	Heat Exchanger
17	Limit Switch
18	Motor Speed Control Board
19	Water Temperature Sensor

The use of original spare parts provided only by "Marelli Systems" or an authorized dealer is mandatory! Self-repair or the use of non-original parts may result in damage or injury.

8. Storage and Recycling

8.1 Disposal of Packaging

The packaging of the device consists of cardboard and plastic foil. They should be separated and disposed of according to local regulations. Keep them away from children.

8.2 Storage when not in use for a long period

If the device is not used for long periods (and/or at the end of each season), follow these steps:

- Turn off the power;
- Clean it according to the procedures in this manual and check for damaged parts. Any damaged parts should be replaced by qualified personnel;
- Protect the device from dust with a suitable cover.

8.3 Recycling the Device

Follow the steps below to properly decommission the device:

- Disconnect the device from the electrical network;
- Pack the device securely using durable packaging;
- Recycle the device according to the applicable regulations in the country of installation.

The recycling of the device is solely the responsibility of the owner, who must act in accordance with applicable national laws regarding safety and environmental protection. At the end of its service life, the product must not be disposed of with household waste. It should be taken to designated recycling centers established by local authorities or to retailers that provide this service.

Separate recycling of the product helps prevent potential negative environmental impacts. In particular, electrical and electronic components must be separated and processed at authorized facilities specialized in handling such materials.

This symbol indicates that the product should not be disposed of with household waste. To prevent harm to health or the environment, users are kindly requested to separate this equipment and/or batteries or accumulators from other types of waste and arrange for disposal through an appropriate service, organization, or retailer.

For more information on the collection of electrical and electronic equipment, appliances, batteries, and accumulators, please contact your local council or public authority responsible for issuing the relevant permits.

Mareli Systems

STEP FORWARD

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Industrial Zone
Simitli, 2730
Region Blagoevgrad
Bulgaria

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www.mareli-systems.com

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